Creeping Meadow Foxtail Pasture Planting, Campbell County, WY

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Objective: Improve pasture
County: Campbell County
Average Annual Precipitation: 14 inches
MLRA: 58B, Northern Rolling High Plains, South Part
Dominant Soil Type: Coaliams fine sandy loam, moderately saline
Elevation: 4327 ft
Site Preparation: Fall disc, spring roller harrow
Seeding Date: May 15, 2010
Seeding Method: Broadcast seed
Acres Seeded: 6 acres
Previous Site History: Smooth brome dominated pasture and hayland
Herbicide: Spot spray noxious weeds
Irrigation: Site is subirrigated along drainage
Grazing: Wildlife only
Monitoring Dates: Oct 2012 & 2014, July 2017, Aug 2020

Fig. 1. Creeping meadow foxtail is a sod-forming grass that remains palatable in the hottest months, and tolerates grazing, flooding, and moderately salty soils.

Table 1. Seeded species and rate.

Scientific Name	Common Name	Cultivar	lbs PLS/acre
Alopecurus arundinaceus	Creeping meadow foxtail	Garrison	3.0

Introduction:

The goal of the field planting was to improve the pasture in the wet areas where water ponds in the spring. The existing grass species, smooth brome, was doing well in the dry areas but a species tolerant of spring flooding was lacking. The field was disc and rolled prior to planting to break-up the existing smooth brome sod and prepare the seedbed. At the time of broadcast seeding, the seedbed was in good condition, there was adequate soil moisture, and no weed infestation.

Results:

Creeping meadow foxtail had good stand establishment in all four evaluation years (Table 2). The 2012 and 2014 evaluation years had normal precipitation and meadow foxtail was the dominant grass in the seeded pastures. In 2017, precipitation was below average causing smooth brome to become the most dominant grass in the upper pastures areas with meadow foxtail having low canopy cover (5% - 10%). In the low areas in 2017, where evidence of spring flooding / standing water occurred, creeping meadow foxtail remained the dominant grass with 90% canopy cover. By 2020, precipitation was again below average but creeping foxtail was the dominate grass in the mowed upper pasture (75% canopy, 4 plants/ft^2) and the lower pasture (90% canopy).

Creeping foxtail was producing seed and spreading to adjacent subirrigated drainages and areas receiving seasonal flooding. The site had indicators of moderate soil salt levels which meadow foxtail was able to tolerate. There were signs of wildlife (whitetail deer and small mammal) use in the

meadow foxtail areas. The landowner was happy with the seeding and is planning to expand creeping meadow foxtail in additional subirrigated pastures that are used for grazing and hay production.

Summary:

- Creeping meadow foxtail established well with the broadcast seeding.
- It was able to expand to adjacent subirrigated and seasonally flooded areas.
- In areas that experience dry periods, the canopy cover varied over time.
- It was the dominant grass species in seasonally flooded areas while tolerating moderate salty soil conditions.

Fig. 2. Creeping meadow foxtail was the dominate grass (75% canopy cover) in areas that had spring flooding.

Table 2. The ten-year evaluation summary for creeping meadow foxtail.

Year	Stand Establishment	Canopy Cover (%)	Plant Height (inches)	Ability to Spread	Erosion Control	Flood Tolerance	Drought Tolerance	Salt Tolerance
2012	Good	n/a	n/a	Good	Good	n/a	n/a	n/a
2014	Good	80%	48	Excellent	Excellent	Good	Good	Good
2017	Good	5% - 90%	36	Excellent	Excellent	Good	Good	Good
2020	Good	75%	22	Excellent	Excellent	Strong	n/a	n/a

n/a = data not available

Fig. 3. Creeping meadow foxtail has expanded to the lower bench, drainage bottoms where it is up to 90% canopy cover.

Fig. 4. In upper bench, drier areas, meadow foxtail is approximately 75% canopy cover and mixed with smooth brome.